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Review Article

Does Nursing Education Prepare Graduates for 21st-Century Skills?

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ABSTRACT

Nursing education plays a crucial role in preparing students—the future members of the profession—for their duties, responsibilities, and roles, as well as in fostering the development of their professional knowledge, attitudes, skills, and competencies, and in enabling them to acquire 21st-century skills. In this context, the aim of this review is to analyze studies on nursing education from the past to the present in terms of 21st-century skills and to evaluate their reflections on nursing education.

Keywords: 21st century skills, Nursing education, Nursing students

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Global Nurs. Insights 2025,12(3), 281-289

"If we teach today's students as we taught yesterday's,

we rob them of tomorrow."

John Dewey

INTRODUCTION

In the contemporary world, rapid and profound transformations are taking place across science, technology, society, politics, the economy, education, and health. These changes inevitably influence the duties, responsibilities, and expectations of professionals in all fields. Nursing is one of the professions most deeply affected by these global shifts. In particular, the aging population, climate change, pandemics, wars, and migration movements have significantly reshaped the roles, responsibilities, and scope of nursing practice.

Given these evolving dynamics, nursing education plays a pivotal role in preparing students—the future members of the profession—for their professional duties and responsibilities. It aims to develop their knowledge, attitudes, skills, and competencies while equipping them with the essential 21st-century skills required to adapt to the changing healthcare environment (Brown, 2018; Jia et al., 2016; Kurudayıoğlu & Soysal, 2019; Mesleki Yeterlik Kurumu, 2019; Wagner, 2008).

In this context, the present review seeks to analyze studies on nursing education from the past to the present through the lens of 21st-century skills and to evaluate how these findings are reflected in nursing education. By doing so, it aims to contribute to the understanding of how nursing education can better align with the demands of contemporary healthcare and the competencies required of future nurses.

21st-Century Skills and Nursing Education

Twenty-first-century skills refer to the knowledge and abilities that individuals need to possess and continuously develop to become responsible citizens and competent professionals in today's world. These skills have been defined in various ways by different organizations and scholars (Kereluik et al., 2013; Kurudayıoğlu & Soysal, 2019). Within this scope, Table 1 presents the conceptual definitions of 21st-century skills proposed by several international institutions, organizations, and researchers.

In general, 21st-century skills have been identified as information, media, and technology literacy; creativity; critical thinking; problem-solving; decision-making; communication; collaboration; productivity skills; learning to learn; self-regulation; and personal and social responsibility (Brown, 2018; Learning and Technology World Forum, 2009; OECD, 2018; Wagner, 2008).

It is undeniable that educational programs and educators hold primary responsibility for imparting 21st-century skills to students and play a crucial role in this process. Supporting this view, the OECD (2018) report emphasizes that "considering that students today will become adults by 2030, some occupations will disappear while new ones will emerge. Therefore, educational programs should go beyond knowledge transmission and ensure that students acquire 21st-century skills" (OECD, 2018). Critical thinking and innovation, as well as communication and collaboration skills should be integrated into curricula, and the integration of technology into educational programs must be ensured. Project-based learning should be emphasized, and students' individualized learning needs should be supported. To succeed in the global economy, individuals need to develop a variety of skills. Accordingly, 21st-century students will require competencies in critical thinking and problem-solving, collaboration, speed and adaptability, initiative and entrepreneurship, effective oral and written communication, information access and analysis, curiosity, and imagination (Atalay et al., 2016; Beers, 2011; Bozkurt, 2021; Brown, 2018; Harari, 2018; Jia et al., 2016).

Details regarding the analysis of studies on nursing education from the past to the present in terms of 21st-century skills and their implications for nursing education are presented below.

World Health Organization – WHO

The World Health Organization (WHO), which conducts international studies on public health, has carried out several initiatives related to nursing and midwifery education. These include the European Strategy for Nursing and Midwifery Education (2001) and the Development of Global Standards for the Initial Education of Nurses and Midwives (2006), culminating in the publication of the Global Standards for the Initial Education of Nurses and Midwives in 2009. These standards emphasize that graduates of nursing programs should become knowledgeable practitioners who adhere to the profession's ethical principles and standards. Moreover, educational institutions are expected to produce graduates with 21st-century skills, including *scientific and cultural competence in nursing care, awareness of the needs and characteristics of the communities they serve, critical and analytical thinking, resource management, effective communication with colleagues and other disciplines, teamwork, leadership, and continuous professional development* (WHO, 2009).

A report was also published following the WHO European Region Chief Nurses' Meeting, held in Warsaw, Poland, on 7–8 October 2011. The report highlighted the evolving roles and functions of nursing. Furthermore, in 2020, the WHO released a report on Competencies for Nurses in Primary Health Care, emphasizing that nurses play a key role in extending, connecting, and coordinating care at the primary care level. The report provides guidance for policymakers, educators, administrators, and clinicians seeking to develop and ensure the competencies of nurses working in primary healthcare within the context of their respective countries (WHO, 2020).

Global Nurs. Insights 2025,12(3), 281-289

Table 1. Conceptual Definitions of 21st-Century Skills According to International Institutions and Organizations

Organization/Institution/Individual	Definition
American Association of Colleges and Universities - AACU (2007)	The 21st-century skills that higher education graduates are expected to possess, depending on their fields of study, include personal and social responsibilities, cognitive and applied skills, and holistic learning (AACU, 2007).
Assessment and Teaching of 21st Century Skills Framework - ATSC21 (2010) **Learning and Technology World Forum (2009)**	The 21st-century skills comprise a combination of the following four key skill domains: (1) Thinking skills, which involve advanced focus and higher-order thinking abilities; (2) Working skills, which emphasize the need for collaboration and teamwork; (3) Technology-based thinking skills, which include recognizing, understanding, locating, using, communicating, and evaluating information; and (4) World awareness skills, which enable individuals to live and compete in countries other than their own and to understand global events and contexts (Learning and Technology World Forum, 2009).
Partnership for 21st Century Skills-P21 (2018)	The 21st-century skills consist of a combination of the following four domains (Partnership for 21st Century Skills (P21), 2018): (1) Core Subjects and 21st-Century Themes, including entrepreneurship, global awareness, civic literacy, financial literacy, environmental literacy, and health literacy; (2) Learning and Innovation Skills, encompassing problem-solving, critical thinking, collaboration and communication, creativity, and innovation; (3) Information, Media, and Technology Skills, which cover information literacy, media literacy, and information, communication, and technology literacy; and (4) Life and Career Skills, including flexibility and adaptability, initiative and self-management, social and cross-cultural skills, and leadership and responsibility.
Definition and Selection of Competencies [DeSeCo] Project (2018) **(The Organisation for Economic Co-operation and Development – OECD (2018)**	The 21st-century skills that individuals are expected to possess by the 2030s include knowledge (disciplinary, interdisciplinary, and epistemic), skills (physical, cognitive, social, and emotional), attitudes and values (global, local, societal, and personal), becoming a competent literate individual (in terms of information, health, and digital literacy), taking responsibility, generating new values, and developing solutions to problems (OECD, 2018).
Future of Jobs Report (2020) **World Economic Forum - WEF (2020)**	The 21st-century skills that individuals are expected to possess today and in the near future (2025) include analytical and critical thinking, problem-solving, innovation, interpersonal and interunit coordination skills, management skills, creativity, emotional intelligence, negotiation skills, and cognitive flexibility, many of which are complementary to one another (Kereluik et al., 2013).

International Council of Nurses-ICN

In 2006, a national framework was proposed for the competencies that nurses should possess. In 2009, the ICN Framework of Competencies for the Nurse Specialist was published, updating the 21st-century skills included within these competencies to ensure that nurses can adapt to changes and developments in healthcare, including evolving scientific knowledge, technology, and clinical practices. The framework identifies the competencies and 21st-century skills that nurses should possess as follows:

- Professional, ethical, and legal practice, including accountability, ethical practice, and legal practice
- Care provision and management, encompassing leadership and management skills

American Nurses Association – ANA

Founded in 1896, the American Nurses Association (ANA) represents registered nurses (RNs) in the United States. However, through its work, it has had a global impact on nursing and nursing education. In a 2004 report, ANA emphasized that nurses should possess competencies and 21st-century skills such as creativity, boundary expansion, change management, considering and taking risks, and tolerance for failure. The report also highlighted the need to restructure nursing education to ensure that students acquire these competencies and 21st-century skills (Clipper & Dawson, 2018).

Directive 2013/55/EU of the European Parliament and of the Council of 20 November 2013

In late 2013, the European Parliament and Council established the minimum training requirements for nurses responsible for general care. Eight competencies were included in these requirements, leading to the adoption of the Directive on Professional Qualifications (2013/55/EU)**.** The professional competencies outlined in this directive include:

- Possessing sufficient knowledge and skills regarding the nature of the profession, ethics, general health, and nursing principles;
- Planning, organizing, and delivering the required nursing care using current theoretical and clinical knowledge;
- Empowering individuals, families, and groups to adopt healthy lifestyles and engage in self-care;
- Collaborating effectively with other healthcare team members and colleagues;
- Communicating and cooperating effectively with other healthcare professionals;
- Independently ensuring and evaluating the quality of nursing care;
- Analyzing the quality of nursing care to improve professional practice.

These competencies are associated with 21st-century skills, including entrepreneurship, environmental and health literacy, problem-solving, critical thinking, collaboration and communication, creativity, flexibility and adaptability, initiative and self-management, social and cross-cultural skills, and leadership and responsibility.

European Federation of Nurses Associations– EFN (2015)

Founded in 1971 as the European Union Nursing Committee**,** the federation was renamed the Federation of European Nurses Associations (FENA) in 1997. Representing institutions that set directives on the free movement of nurses and frameworks for nursing education across Europe, the federation aims to maintain relationships among national nursing associations, uphold nursing values, and ensure continuity between specialist nurses and other healthcare professions (WEF, 2016).

The federation, which has conducted numerous studies on the development of nursing and nursing education, endorsed the Directive on Professional Qualifications (2005/36/EC), adopted by the European Parliament and Council in 2005 and amended by 2013/55/EU. According to this directive, the professional competencies and associated 21st-century skills include (WEF, 2016):

- Culture, ethics, and values;
- Health promotion, disease prevention, guidance, and teaching;
- Teamwork and communication;
- Decision-making;
- Research, development, and leadership;
- Nursing care (theoretical education and instruction, diagnosis and assessment, care planning, nursing interventions, evaluation, and quality assessment).

Overall, studies and guidelines from WHO, ICN, ANA, the European Parliament and Council directives, and the Federation of European Nurses Associations consistently emphasize that nursing education programs must equip newly graduated or practicing nurses with the competencies and 21st-century skills necessary to adapt to evolving scientific knowledge, technology, and healthcare practices. These competencies and skills include scientific and cultural competence in nursing care, consideration of the needs and characteristics of the communities they serve, critical and analytical thinking, resource management, effective communication with colleagues and other disciplines, collaboration, teamwork, leadership, and continuous professional development**.**

To ensure that nursing students acquire these competencies and 21st-century skills before graduation, nursing education programs have been revised. Courses and topics have been updated, and student-centered active teaching methods have been incorporated. Additionally, monitoring, assessment, and improvement processes have been implemented from the start of students' education until their graduation (Clipper & Dawson, 2018; EFN, 2024; WEF, 2016; WHO, 2009).

World Economic Forum (2016)

Between January 20–23, 2016, the World Economic Forum was held in Davos under the theme of the "Fourth Industrial Revolution". At the conclusion of the forum, the "Future of Jobs" report was published. The report emphasized that the future workforce must possess competencies, capabilities, and skills such as cognitive flexibility, creativity, problem sensitivity, active listening, oral and written communication, reading comprehension, critical thinking, self-monitoring and evaluation, and information technology literacy, among others (OECD, 2018).

Organisation for Economic Co-operation and Development (OECD) Competency Framework (2018)

Established in 1961, the organization launched the OECD Key Competencies Project (DeSeCo: Definition and Selection of Competencies) in 2014. This project laid the foundation for the Future of Education and Skills 2030 initiative. The resulting report, published in 2018, emphasized the importance of competencies that students are expected to possess by the 2030s. While these competencies may vary depending on specific professional roles, duties, responsibilities, and requirements, the report highlighted that core competencies are common across all professions. These competencies include (OECD, 2018):

- Knowledge(disciplinary, interdisciplinary, and epistemic);
- Skills (physical, cognitive, social, and emotional);
- Attitudes and values (global, local, societal, and personal)

Moreover, the report emphasized that individuals within the education system should be competent literates(information, digital, and health literate), take responsibility, generate new values, solve problems, and possess attributes and skills such as being innovative, responsible, adaptable, creative, curious, open-minded, and conscientious (QF-EHEA, 2005).

Overall, reports published by the World Economic Forum and under the OECD Competency Framework outline the knowledge, skills, attitudes, values, competencies, and 21st-century skills (including creativity, oral and written communication, reading comprehension, critical thinking, self-monitoring and evaluation, and information technology literacy) that the future workforce and students of the 2030s are expected to possess. Nursing education has been revised and restructured to ensure that future professionals acquire these essential attributes during their training (EFN, 2024; OECD, 2018; QF-EHEA, 2005).

Bologna Declaration (1999)

The Bologna Process is a reform initiative aimed at creating the European Higher Education Area by establishing comparable higher education diplomas and degrees, implementing the European Credit Transfer and Accumulation System (ECTS)**,** promoting the mobility of students and academic staff, enhancing Europe's role and effectiveness in higher education, and developing and disseminating quality assurance systems in higher education (Şenyuva, 2016; TYYÇ**,** 2024).

Global Nurs. Insights 2025,12(3), 281-289

Within this framework, the first studies in Türkiye to determine the knowledge, skills, and competencies required of graduates from nursing education programs were conducted on January 11, 2012, at the Florence Nightingale Faculty of Nursing, Istanbul University, considering the Turkish Higher Education Qualifications Framework (TYYÇ). The meeting involved nursing school administrators and faculty members. As a result, the National Nursing Competencies were identified, defining the professional knowledge, skills, attitudes, and competencies that nursing students should possess upon graduation. These competencies guided the assessment of students' knowledge, skills, attitudes, and competencies (Güneş, 2012; Tuna, 2015).

In line with the Bologna Process, nursing education programs have been structured to include program-level competencies, encompassing professional knowledge, skills, attitudes, and competencies, as well as 21st-century skills. Courses and subjects have been added to support students in acquiring these competencies. Scientific and social activities have been organized, and educators have been guided to use student-centered teaching methods, techniques, and materials to facilitate the development of professional knowledge, skills, attitudes, competencies, and 21st-century skills in nursing students. Learning environments, including laboratory sessions, have been redesigned to support the development of professional knowledge and skills and to foster interdisciplinary knowledge, digital literacy, information literacy, creativity and innovation, communication and collaboration, problem-solving, critical thinking, ethical and emotional awareness, life skills, cultural competence, independent work, responsibility, and other 21st-century skills (Clipper & Dawson, 2018; EFN, 2024; Güneş, 2012; HUÇEP, 2014; Tuna, 2015; TYYÇ, 2024; Şenyuva, 2016; WHO, 2009).

National Core Nursing Education Program (HUÇEP)

Within the scope of the Bologna Process, Türkiye established the National Core Nursing Education Program (HUÇEP) Commission in 2002 to develop minimum core standards for nursing education and to ensure standardization in undergraduate nursing programs. Work on the National Core Nursing Education Program was initiated, and the resulting HUÇEP report was implemented in the 2003–2004 academic year, prompting nursing education institutions to review and align their curricula with the HUÇEP standards. HUÇEP has been updated to reflect changes in the population's health needs and priority health issues, developments in healthcare delivery and nursing services, policy and practice changes, and innovations introduced to the Turkish higher education system by the Bologna Process. The Council of Higher Education Nursing Commission Education Group began updating HUÇEP on April 1, 2013, completing the process in 2014. In the updated HUÇEP (2014), Bachelor of Nursing Program Competencies were determined in accordance with the National Nursing Competencies (HUÇEP, 2014). Most recently, during the Council of Deans of Nursing Faculties (HEMDEK) meeting on June 10, 2021, it was decided to review and further update HUÇEP. For this purpose, a working group was established to prepare HUÇEP-2022 (HEMED, 2024).

In general, nursing education programs have been structured—or are being structured—to align with the subjects included in HUÇEP-2022.These programs aim to ensure that students acquire professional knowledge, skills, and competencies, as well as 21st-century skills, through content covering: nursing interventions for the protection, promotion, and maintenance of individual, family, and community health; the restoration of health and rehabilitation in disease conditions; safe patient care practices; fundamental concepts of human health and illness, environment, and nursing; communication; teamwork; ethics; evidence-based research; problem-solving; and critical thinking, among others.

Nursing Education Association (HEMED)

Founded on June 14, 2007, in İzmir, the association aims to create a share division and mission for the future of undergraduate and graduate nursing education, facilitate collaboration and support for student and educator exchanges at national and international levels, provide recommendations on core nursing curricula, and plan initiatives to influence national and international policies related to nursing education.

The association actively monitors issues in nursing education and conducts numerous initiatives to improve nursing education. Among these, the most significant activities focus on enhancing undergraduate nursing education and determining the competencies that graduates should possess, including:

- Conducting meetings with nursing education administrators regarding the nursing curriculum and prevailing challenges;
- Identifying the competencies required to obtain the professional title of "Nurse."

Additionally, on September 6, 2011, under the association's umbrella, the Nursing Education Accreditation Board/Accreditation Education Committee, the Standards Setting and Development Commission, the Program Evaluation and Monitoring Commission, and the Advisory and Education Commission were established. As a result of the association's work and consultations on nursing education accreditation, it was decided on January 28, 2013, that the Nursing Education Accreditation Board would continue as an independent legal entity under the name Nursing Education Programs Evaluation and Accreditation Association (HEPDAK) (HEPDAK, 2024).

Founded in 2013, HEPDAK aims to evaluate and audit nursing education institutions in Türkiye to ensure the training of more qualified nurses, the provision of safe and high-quality nursing care, and the promotion of public health. Based on the seven core standards it has established—Program Objectives, Program Outcomes, Curriculum, Students, Faculty, Physical Infrastructure, and Educational Management—HEPDAK audits multiple aspects of nursing education institutions. These include: whether programs have clearly defined objectives that outline the career goals, practice areas, and roles of nursing students; whether program outcomes specify the knowledge, skills, and behavioral components that students must acquire; whether

students achieve all program outcomes by graduation; and whether courses include content that supports the attainment of university graduate attributes.

Under HEPDAK standards, program competencies, which define the knowledge, skills, and behavioral components students must acquire before graduation, are determined with reference to the National Nursing Competencies for Bachelor's Programs. Furthermore, students' acquisition of 21st-century skills—such as critical thinking, problem-solving, lifelong learning, participation in scientific, socio-cultural, and sports activities, and involvement in research processes—is evaluated within the scope of HEPDAK standards (HEPDAK, 2024).

Council of Higher Education Future Professions, The Future of Professions Congress (2019)

In 2019, the Council of Higher Education (CHE) organized the "Future Professions, The Future of Professions Congress". The congress report addressed numerous current and significant topics, including 21st-century skills, changes in the work environments of healthcare professionals, future professions, the future of existing professions, and the competencies and capabilities expected of bachelor's degree graduates. Nursing was identified as one of the professions of the future, and it was emphasized that the profession is likely to undergo significant transformations. The report emphasized the need to equip young people with 21st-century skills.

In Türkiye, the nine key competencies expected of all professionals were defined as: communication in the mother tongue, communication in foreign languages, mathematical competence and basic competence in science/technology, digital competence, learning to learn, social and civic competence, initiative and entrepreneurship, cultural awareness, and expression (Geleceğin Meslekleri Mesleklerin Geleceği Kongresi, 2019).

Ministry of Health – Guide to Core Competencies in Nursing (2021)

To define the framework of core competencies expected from registered nurses in general patient care and to establish these competencies as national standards, the "Guide for Core Competencies in Nursing" was published in February 2021. The guide identifies seven core competency criteria along with their sub-criteria: professionalism, effective communication, evidence-based practice, care management, quality improvement, teamwork and collaboration, and professional leadership.

For example, professionalism in nursing is defined as: *"While providing patient-centered care, continuously improving one's knowledge and practices to enhance the quality of care, and delivering services in accordance with current practice standards, professional ethical codes, and legal regulations."* The sub-criteria for this competency indicate that nurses are expected to (Hemşirelikte Temel Yetkinlikler Kılavuzu, 2021):

- Take responsibility for nursing care and practices;
- Provide patient-centered care in line with evolving and changing health needs;
- Deliver nursing care based on valid and up-to-date knowledge specific to their practice area;
- Conduct nursing care and practices in accordance with professional values and ethical codes;
- Apply problem-solving and critical thinking skills in nursing services.

Overall, nursing has been recognized as one of the professions of the future, and both the CHE "Future Professions, The Future of Professions" Congress and the Ministry of Health's Guide for Core Competencies in Nursing have emphasized that nurses are expected to possess effective communication, digital competence, evidence-based practice, care management, learning-to-learn, teamwork and collaboration, problem-solving, professional leadership, and other competencies, as well as 21st-century skills (Geleceğin Meslekleri Mesleklerin Geleceği Kongresi, 2019; Hemşirelikte Temel Yetkinlikler Kılavuzu, 2021).

This underscores the importance of structuring nursing education programs to ensure that students acquire these skills. Moreover, for the improvement and enhancement of nursing education quality, it is crucial that these initiatives are taken into account and that curricula are developed and organized in alignment with these standards and competency frameworks.

Assessment of Nursing Students' Acquisition of 21st-Century Skills

Evaluating the 21st-century skills that nursing students are expected to possess is crucial for determining their competency levels, identifying the skills they already have or need to develop, addressing gaps, assessing educational programs, and implementing necessary adjustments based on evaluation outcomes (Boztepe & Terzioğlu, 2016; Korhan et al., 2016).

WHO emphasized in reports published in 2000 and 2020 that nursing education should be competency-based and that competencies and 21st-century skills must be regularly assessed and updated in response to evolving societal needs (WHO, 2009; WHO, 2020).

To identify students' competencies and 21st-century skills, various assessment methods are employed in addition to written examinations. These include checklists, rating scales (rubrics), portfolios, patient/nurse evaluations, clinical scenarios, simulations, projects, Objective Structured Clinical Examinations (OSCEs), interviews, observations, self-assessments, peer assessments, situational judgment tests, and computer simulations. However, because educators are often insufficiently familiar with these assessment methods, objective and high-quality evaluations are not always possible (Boztepe & Terzioğlu, 2016; Demir & Kutlu, 2016; Jones et al., 2010; Korhan et al., 2016; Kurudayıoğlu & Soysal, 2019; Mollahadi et al., 2018).

Recommendations for Developing 21st-Century Skills in Nursing Students

Nursing education programs should aim to equip students with 21st-century skills, particularly problem-solving, creativity, critical thinking, collaboration, communication, social responsibility, and literacy skills. To ensure that nursing students develop into professionals who possess these competencies, a transformation is required at the classroom, school, and educational system levels. Within this framework, the following recommendations have been proposed (Demir & Kutlu, 2016; HEPDAK,

2024; Jones et al., 2010; Korhan et al., 2016; Mollahadi et al., 2018; Nieveen & Plomp, 2018; Schleicher, 2018; Voogt & Roblin, 2012).

For nursing students:

- Nursing education programs should clearly define which 21st-century skills—such as problem-solving, creativity, critical thinking, collaboration, communication, social responsibility, and literacy skills—need to be developed.
- The use of digital simulations and virtual patient applications, including clinical scenarios, should be widely integrated into both theoretical and practical courses to support the development of these skills.
- Training should be provided in basic computer skills, effective use of digital tools and software, and data analysis to enhance digital literacy.
- Students should acquire foundational knowledge and skills in telehealth, artificial intelligence, and electronic health record (EHR) systems, while being introduced to digital patient monitoring systems, mobile health applications, and other health informatics technologies in clinical practice.
- Students should develop the ability to access accurate information and utilize digital data sources in scientific research.

For nursing educators:

- Educators must possess the competencies to teach and foster 21st-century skills in students.
- They should select and apply instructional methods, techniques, and materials (e.g., discussion, simulation, projects, reflection, role-playing, case studies, videos, posters) in required and elective courses to support skill development.
- Educators should integrate information technologies into the curriculum.

To assess students' acquisition of these skills, educators should employ a diverse range of evaluation methods, including portfolios, simulations, projects, checklists, rating scales, self-assessment, peer assessment, patient/nurse evaluations, OSCEs, observation, and interviews. Additionally, students should be encouraged to participate in in-school and extracurricular activities that promote personal, social, and intellectual skills, as well as professional development (e.g., exchange programs, student organizations, scientific events). Emphasis should be placed on interdisciplinary collaboration (involving educators, students, families, NGOs, leaders, policymakers, institutions, and other universities) to create learning opportunities (Schleicher, 2018; Voogt & Roblin, 2012).

CONCLUSION

Numerous international and national professional organizations have conducted studies aimed at ensuring that nursing students acquire enhanced knowledge, skills, and competencies**,** and are equipped with 21st-century skills before graduation. Taking these initiatives into account, nursing education programs are being restructured to enrich students' perspectives on life and to enable them to develop competencies such as critical thinking, communication, collaboration, problem-solving, information literacy, and lifelong learning.

As a result, nursing students are expected to become well-qualified individuals and competent nurses who are autonomous, socially aware, ethically and aesthetically sensitive, responsible, politically empowered, and proficient in patient care, ultimately serving as the driving force of the healthcare system.

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